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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/717,515 | 11/21/2003 | Yosuke Oyama | OYAMA2 | 8401 |

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| EXAMINER | |
|---|---|
| HUSON, MONICA ANNE | |
| **ART UNIT** | **PAPER NUMBER** |
| 1732 | |

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/717,515 | OYAMA, YOSUKE | |
| | Examiner | Art Unit | |
| | Monica A. Huson | 1732 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *11/21/03*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) *5 and 6* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,7 and 8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *041304*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Election/Restrictions*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-4, 7 and 8, drawn to a method of molding, classified in class 264, subclass 328.7.

II. Claim 5, drawn to a molding die, classified in class 425, subclass 542+.

III. Claim 6, drawn to a fuel cell separator, classified in class 429, subclass 34.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another and materially different process, such as one that does not require the movable die to move toward the stationary die after or while the material is supplied thereto.

Inventions I and III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process, such as one that

does not require the movable die to move toward the stationary die after or while the material is supplied thereto.

Inventions II and III are related as apparatus and product made. The inventions in this relationship are distinct if either or both of the following can be shown: (1) that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for making a materially different product or (2) that the product as claimed can be made by another and materially different apparatus (MPEP § 806.05(g)). In this case the product as claimed can be made by another and materially different apparatus, such as one that does not require a variable volume molding cavity.

During a telephone conversation with Sheridan Neimark on 27 January 2006 a provisional election was made with oral traverse to prosecute the invention of Group I, claims 1-4 7, and 8. Affirmation of this election must be made by applicant in replying to this Office action. Claims 5 and 6 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the stationary die" in 14. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braun et al. (U.S. Patent 6,180,275), in view of Uda et al. (U.S. Patent 4,489,033). Regarding Claim 1, Braun et al., hereafter "Braun," show that it is known to carry out a fuel cell separator molding method for molding an electrically conductive material (Abstract) comprising shaping molding material containing electrically conductive material in a die of any desired geometry (Abstract; Column 5, lines 50-52; It is being interpreted that Braun's teaching of any desired geometry would suggest the claimed cavity which forms a plurality of fuel cell separators at one time.). Braun does not give specific molding steps. Uda et al., hereafter "Uda," show that it is known to carry out a molding method comprising providing a cavity having a variable volume and a molding portion in the cavity (Figure 1, element 3); providing a movable die for cooperation with the cavity (Figure 1, element 5); supplying the electrically conductive material to the cavity (Figure 2), and after or while the electrically conductive material is supplied to the cavity, moving the movable die toward the stationary die to reduce the volume of said cavity (Figure 4). Uda and Braun are combinable because they are concerned with a similar technical

field, namely, methods of injection and/or compression molding. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Uda's specific molding steps to carry out Braun's general molding teaching in order to properly form the molded article.

Regarding Claim 2, Braun shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the electrically conductive material is supplied to said cavity from one supply means and is compression molded (Abstract), meeting applicant's claim.

Regarding Claim 3, Braun shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the electrically conductive material is supplied to the cavity from an injection device (Abstract), but he does not show specific injection molding details. Uda shows that it is known to carry out a method wherein the molding material is supplied directly through a gate portion only or through a sprue portion and the gate portion only, and is injection compression molded (Figures 2-4). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Uda's specific molding steps to carry out Braun's general molding teaching in order to properly form the molded article.

Regarding Claim 4, Braun shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the electrically conductive material is a melted resin material containing 60-95% by weight of an electrically conductive filler (Column 4, lines 41-49), meeting applicant's claim.

Regarding Claim 7, Braun shows the process as claimed as discussed in the rejection of Claim 3 above, including a method wherein the molding die is of any desired geometry (Abstract; Column 5, lines 50-52; It is being interpreted that Braun's teaching of any desired geometry would suggest the claimed cavity which forms a plurality of fuel cell separators at one time.), and the electrically conductive material is supplied to a cavity from an injection device (Abstract; Figure 1, element 10). Braun does not show specific molding details. Uda shows that it is known to carry out a method wherein said cavity having a variable volume is disposed in a substantially horizontal orientation which extends horizontally from a centrally disposed inlet to the cavity from the injection device, the inlet device being spaced in the middle of the molding portion (Figures 1-4; It is noted that the drawings show the claimed orientation when viewed from the long side of a letter-sized paper.). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Uda's specific molding details to carry out Braun's general molding teaching in order to properly form the molded article.

Regarding Claim 8, Braun shows the process as claimed as discussed in the rejection of Claim 7 above, including a method wherein the electrically conductive material comprises a melted resin material (Abstract; Column 5, lines 59-61), meeting applicant's claim.

## *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A. Huson whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Monica A Huson
March 1, 2006

MICHAEL P. COLAIANNI
SUPERVISORY PATENT EXAMINER